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Special Issue Reprint

## The Ins and Outs of miRNAs as Biomarkers

**Edited by: Giuseppe Iacomino and Fabio Lauria**

miRNAs are small noncoding RNAs that control gene expression at the post-transcriptional level. It has been recognized that dysregulation of miRNAs reflects the state and function of cells and tissues, contributing to their dysfunction. The identification of hundreds of extracellular miRNAs in biological fluids has underscored their potential in the field of biomarker research. In addition, the therapeutic potential of miRNAs is receiving increasing attention in numerous conditions. On the other hand, many operational issues, including stability, delivery systems, and bioavailability, have yet to be resolved. In this dynamic field, biopharmaceutical companies are increasingly engaged, and ongoing clinical trials point to anti-miR and miR-mimic molecules as novel classes of molecules for upcoming therapeutic applications. This reprint aims to provide a broad overview of current knowledge on several outstanding issues and new opportunities offered by miRNAs in the treatment of diseases and as early diagnostic tools for next-generation medicine.

